

Congress is the meeting together and getting to know one's fellow-workers; and an expression of thanks is due to the organising committee under the joint presidency of Profs. Wiesner and von Wettstein, with Dr. Zahlbruckner as the energetic secretary, to Prof. Flahault, the firm and genial president of the conference on nomenclature, and finally to Dr. Briquet, whose name must always be associated with the latest attempt to solve the vexed question of plant-nomenclature.

At the final meeting, in response to an invitation from the Belgian Government voiced by Prof. Errera, Brussels was selected as the place of meeting for the third congress, which will be held in 1910.

A. B. RENDLE.

#### ENTRANCE EXAMINATION TO THE INDIAN FOREST SERVICE.

ON May 11 the Secretary of State for India issued the regulations for the forthcoming entrance examinations for the Indian Forest Service. Amongst the features of these regulations two are of considerable importance.

The age limit is raised to twenty-one years on January 1 preceding the examination, so that the average B.A. who graduates usually between twenty-one and twenty-two may compete. The second point of interest is the schedule of the subjects in which he is to be examined.

According to the regulations given in the East India (Forest Service) Blue-book, Cd. 2523, the subjects in which the candidates are to be tested are four—chemistry, physics, botany, and zoology—and the schedules imply that the knowledge which the candidate is expected to exhibit is of a very limited description. Speaking roughly, the examination will be harder than the preliminary scientific examination which every candidate for a medical degree is obliged to take, but not much harder. Medical students generally pass their preliminary scientific examination during their first year, though there are cases in which they pass it while still at school. The Indian forestry students may pass their entrance examination in their third or fourth year. The Blue-book stated that each candidate must qualify in all four subjects, but for some reason or another—and probably because the entry under the new regulations is small—the Secretary of State for India has now still further lightened a very elementary examination, and is now advertising in our columns that zoology is optional. Thus men, who may be graduates, will be admitted into a great public service on an examination which comprises but three out of the ordinary four subjects which candidates for medical degrees normally pass in their first year, and judging by the schedules the amount in each subject to be “got up” is little more than in the preliminary examination for an M.B. degree.

When we remember that in the Indian Civil Service examination the standard of the subjects is that of an honours examination, and that a candidate takes not three subjects, but eight, nine, ten, or more, it is obvious that the Secretary of State is trying to recruit the forest officers from men of a markedly inferior intellectual range, and the strictures which were passed by Sir George King on the Indian foresters at the Dover meeting of the British Association will probably need repeating a few years hence.

The schedules are well adapted for an elementary pass or plough examination, but are ill adapted for a competitive examination. It will be very difficult, if not impossible, to select the best candidates competing in an examination carried on on these lines.

NO. 1864, VOL. 72]

#### NOTES.

AN important step in the direction of the adoption by this country of a decimal system of weights and measures has been taken by the Board of Trade. In reply to a resolution sent to the Board of Trade by the secretary of the Association of Chambers of Commerce, in which the Board was asked to authorise weights of 20 lb., 10 lb., and 5 lb. as aliquot parts of the cental, Lord Salisbury has written:—“With reference to your letter of March 14 last, in which you suggest that new denominations of weights of 20 lb., 10 lb., and 5 lb. should be legalised for use in trade, the Board of Trade have given careful consideration to the representations which have been made, and they are prepared to assent to the application. Steps will, therefore, be taken for the preparation of standards of the same octagonal form as the present 50 lb. weight.” The chambers consider that this concession will save time, labour, and expense, as the 50 lb. weight has done already.

COMMANDER PEARY sailed on Sunday last to make a further attempt to reach the North Pole. Before leaving, he communicated various particulars respecting his expedition to Reuter's Agency. His plan is based upon the Smith Sound, or “American” route to the Pole, and his object is to force his ship to a base within 500 miles of the Pole itself, and then to sledge across the Polar pack. The Arctic ship *Roosevelt*, which has been specially built for this expedition, has been constructed so as to withstand the heavy ice pressure, and is so shaped that the pressure of the ice pack will have the effect of raising the vessel out of the water. The ship will carry a wireless telegraphic outfit, which, with one or two relay stations in Greenland, will keep her in communication with the permanent telegraph station at Chateau Bay, Labrador, and thence by existing lines with New York. By the same means communication with the expedition will be possible, at least for a portion of the distance, when in February next the sledge party leaves the *Roosevelt* for the northern dash. The ship will carry two years' supplies. With regard to the route to be followed, it is intended to establish a permanent sub-base at Cape Sabine, on the west coast of Smith's Sound, and, after securing the services of the necessary Eskimos, to force the vessel through Kane Basin and Kennedy and Robeson Channels to the northern coast of Grant Land or of Greenland, if the conditions should compel it, and there winter within 500 miles of the Pole. From these winter quarters a start north over the Polar pack will be made in February. The explorers will have available a probable period of five months in which to traverse the distance between their vessel and the Pole. In the event of the failure of the *Roosevelt* to force Kennedy and Robeson Channels during the first summer the dash for the Pole will have to be postponed until February, 1907.

THE seventy-third annual meeting of the British Medical Association will take place at Leicester from July 24 to 28. Addresses in medicine and surgery will be delivered respectively by Dr. H. Maudsley and Mr. C. J. Bond, and, following the precedent of last year, a popular lecture will be given (on July 28) by Prof. Wm. Stirling, who will take as his subject the phenomena of fatigue and repose.

THE Geologists' Association announces an excursion to Central Wales extending from July 24 to 29. The headquarters are to be at Llandrindod Wells.

THE first International Congress of Physiotherapy will be held at Liège from August 12 to 15 next. The questions proposed for discussion are, says the *British Medical*

*Journal*:—(1) the specific indications of the several physiotherapeutic agents; (2) description of the apparatus and technique required in each case; (3) (a) how university teaching on physiotherapy is given at the present time in the various countries where instruction is given on the subject; (b) how such instruction should be given in medical faculties; (4) the indication of suitable means for the vigorous repression of quackery and the abuses caused by "healers" who pretend to treat by physiotherapeutic procedures. Papers should be sent to Dr. Gunzburg, 7 Rue des Escrimieurs, Antwerp.

THE full programme of the International Congress on Tuberculosis (meeting in Paris from October 2 to 7 next) has now been issued, and is summarised in the *British Medical Journal*. In the section of medical pathology, presided over by Prof. Bouchard, the following subjects are proposed for discussion:—(1) treatment of lupus by the new methods; (2) early diagnosis of tuberculosis by the new methods. In the section of surgical pathology, presided over by Prof. Lannelongue, the following questions will be considered:—(1) comparative study of different forms of tuberculosis; (2) ileo-cæcal tuberculosis; (3) surgical interventions in tuberculosis of the meninges and encephalon; (4) tuberculosis and traumatism. In the section of protection and assistance of childhood, presided over by Prof. Grancher, the questions to be discussed are:—(1) family protection; (2) protection in the school; (3) seaside sanatoriums; (4) school mutual aid societies and the part played by them in the prevention of tuberculosis. In the section of protection and assistance of adults, and social hygiene, attention will be directed to:—(1) etiological factors of tuberculosis, economic conditions in the social etiology of tuberculosis; (2) assurance and friendly societies in the prevention of tuberculosis; (3) the part of dispensaries and sanatoriums in the struggle against tuberculosis; (4) sanitation and healthiness of the dwelling; (5) hygiene of tuberculous persons in factories, workshops, places of business, army and navy; (6) disinfection of the dwelling of the subject of tuberculosis (administrative regulations and practical measures). In connection with the congress there will be an exposition arranged in the four following departments:—(1) scientific: a museum of microbiology, experimental, medical, surgical, and veterinary tuberculosis; (2) social: ravages caused by tuberculosis, prevention, assistance; (3) historical: tuberculosis in various ages, in art and in history; (4) industrial: prevention, alimentation, private dwellings, public dwellings (schools, barracks, &c.); travel (railway carriages, ships, hotels); assistance (hospitals, dispensaries, sanatoriums).

THE Museums Association held its annual meeting last week at Worcester; the proceedings opened on Tuesday, and on Thursday the president (Lord Windsor) delivered his address.

A TABLET to the memory of Sir Humphry Davy was unveiled by Mr. Marconi at Clifton, Bristol, on Friday last. The tablet is to be placed on 3 Rodney Place, Clifton, in which house Sir Humphry Davy lived for a time.

PROF. GUIDO CORA has been elected a member of the Pontificia Accademia Romana dei Nuovi Lincei of Rome.

WE regret to see the announcement of the death, on June 29, at Washington, of Mr. George H. Eldridge, one of the geologists on the staff of the United States Geological Survey. He contributed many valuable papers to geological science, dealing with coal, petroleum, asphalt, and bituminous rock deposits.

THE death occurred on July 10 of Sir Peter Nicol Russell, who, by his gift of 100,000*l.*, founded the school of engineering of Sydney University. He was eighty-nine years of age.

THE death is announced of Mr. Charles Moore, director of the Sydney Botanic Gardens and of the Government Domain and Plantations. He had attained the age of eighty-six years.

A MEETING of the central committee for physical education in Italy took place recently in Rome under the presidency of Mr. L. Lucchini. Among those present were the Italian Under-Secretary of State for Instruction, and delegates of the Ministries of Instruction, War and Marine; there were also representatives of the municipality of Rome, the gymnastic association, and the Alpine and touring clubs of the city. The main object of the committee is to stimulate interest in the physical education of the Italian people, which, it is contended, has hitherto been much neglected.

A REUTER telegram from Penang states that the Chinese Consul of that place has offered to build and equip a Pasteur institute for the Straits Settlements and the neighbouring regions. The action has been prompted by the recent outbreak of rabies in Penang, resulting up to the present in four deaths.

BOTH Messrs. Siemens and Halske, of Berlin, and the Marconi Company are in communication with the Althing, the proposal being to establish communication by wireless telegraphy between Iceland and the Continent and internally in the island. According to a Reuter telegram, the Berlin firm offers to provide the installation for about 36,666*l.*, and to guarantee the efficient working of the system.

IN connection with an exhibition to be held next year at Milan, there is to be a competition of appliances designed to safeguard against accidents, and the following prizes will be offered:—a gold medal and 320*l.* for a new device which will suppress the danger to life coming from a contact formed between the primary and secondary circuits of an electric transformer; a gold medal and 40*l.* for a crane or hoist provided with a simple and practical device preventing the rotation of the cranks on the descent of the load; a gold medal and 20*l.* for a simple, strong and effective apparatus for automatically stopping cars which are moving upon an inclined plane in case the traction cable should break; a gold medal for a practical device for exhausting and collecting the dust formed during the sorting and cutting of rags by hand; a gold medal for an apparatus for localised exhaust and successive elimination of dust produced during the cardage of flax, tow, hemp, jute, &c.; and a gold medal for an effective device to prevent the diffusion of dust in places where the preparation of lime and cement is carried on. The competition is to be under the auspices of the Association of Italian Industries, and names of competitors must be sent to the secretary at Foro Bonaparte 61, Milan, before the end of the present month.

A NUMBER of prizes ranging in value from 10,000 marks to 750 marks are offered by the Internationales Arbeitsamt, Basel, Switzerland, for essays on means of combating lead poisoning. The essays must contain proposals for the elimination of the danger to which no objection can be made on technical, hygienic, or economic grounds. In proposing new apparatus or alterations in process, particulars must be given as to the cost and saving involved in such proposals. It is desired that proposals should be

made for the improvement of existing laws upon the subject in all countries, and attention directed to the alterations which would be necessary for putting the suggestions into effect. The papers, which may be in English, French, or German, must reach the Internationales Arbeitsamt by the end of the present year.

WE learn from *La Nature* that the annual prize of the French Society of Civil Engineers has been awarded for 1905 to two men of science—to M. Alphonse Tellier for his researches on motor navigation, and more particularly for his memoir on "Les canots automobiles à grand vitesse," and to M. J. Rey for his memoir on "Les turbines à vapeur en général, et plus particulièrement sur les turbines du système Rateau et leurs applications." The Alphonse Couvreur prize has been awarded to M. F. Arnodin for his work on trans-shipping bridges. The 1905 Giffard prize will be postponed until 1908.

At the annual distribution of prizes at Guy's Hospital Medical School last week the new Gordon Museum of Anatomy and Pathology was open to inspection. The museum is, it will be remembered, the gift of Mr. Robert Gordon, who at the distribution of prizes was presented by the governors and medical staff with a replica in silver of the statue of Thomas Guy in the hospital square, together with a bound memorial volume signed by the Prince of Wales and all the members of the governing body. The specimens in the museum now number upwards of 12,000, and their re-arrangement and classification will, it is hoped, be completed within the next few months.

PROF. A. PENCK contributes an account of the progress made in the organisation and execution of the map of the world on a scale of 1 : 1,000,000 to the *Zeitschrift* of the Berlin Gesellschaft für Erdkunde. It appears that up to March of this year the four chief organisations—French, German, British, and Indian—had completed 69 sheets out of 437 planned. A sketch map shows the sheets completed and in preparation.

THE Canadian Department of Marine and Fisheries has recently published a valuable paper by Dr. W. Bell Dawson on the currents at the entrance of the Bay of Fundy and on the steamship routes in its approaches off southern Nova Scotia. The results are based on observations made by the tidal and current survey in 1904, and show that the movements of water are chiefly tidal in character, there being no marked general movement in any one direction.

THE report on the census of the Philippine Islands, taken in March and April, 1902, has recently been issued. It consists of four volumes, comprising three thousand pages, and is freely illustrated with statistical maps and diagrams. An excellent summary of this report, which includes papers on the climate and resources of the islands besides other statistical information, appears in the Bulletin of the American Geographical Society for May, from the pen of Mr. Henry Gannett.

ALMOST from time immemorial, in a zoological sense, the South American electric eel has been regarded as the type (and sole representative) of the genus *Gymnotus*, as *G. electricus*, and it is thus named in the "Cambridge Natural History." In a paper on the Gymnotidae published in the *Proceedings of the Washington Academy* (vol. vii., p. 159), Messrs. Eigenmann and Ward revive, however, an old proposal that the *Gymnotus carapus* of Linnæus should be taken as the type form, and the electric eel referred to a genus apart. They even go so far as to exclude the latter species from the Gymnotidae altogether—a proceed-

ing which forcibly recalls the well-known saying with regard to the play of *Hamlet*. This is, indeed, in our opinion, one of those cases in which, whatever may be original rights in the matter, everything is to be gained by adhering to established practice. In the text the authors define the different genera they include in the Gymnotidae, describing some of these for the first time.

IN another issue of the serial last quoted (*Proc. Washington Acad.*, vol. vii., pp. 27-157) Mr. W. F. Allen records observations on the blood-vascular system in the fishes of the group Loricati, that is to say, those constituting the families Scorpenidae, Anoplopomatidae, Hexagrammidae, and Cottidae. In view of the circumstance that it is at present impossible to determine whether certain features in the circulatory system of these fishes are primary or secondary, no inductions are drawn from the observations with regard to the classification of the group. Nevertheless, it is suggested that the blood-vascular system may eventually prove to have a value in the classification of families and genera, although it would be useless in the case of species.

WE have received a copy of a circular issued by the Concilium Bibliographicum of Zürich in regard to a proposed physiological bibliography. A card catalogue of literature of this description was commenced on July 1, in cooperation with the *Zentralblatt für Physiologie*, and the support of all interested in the matter is requested. To aid the scheme a committee was appointed at the sixth International Physiological Congress held at Brussels, the names of the members of which are given in the circular.

THE annual report of the Selborne Society, published in the July number of *Nature Notes*, points to a flourishing condition of that body, although more members are required if its work is to be still further developed. Mr. W. M. Webb has accepted the office of hon. treasurer, *vice* Mr. R. M. Wattson, retired. Special attention is directed in the report to the preservation and protection of places of antiquarian interest or natural beauty in the neighbourhood of London. Among these, the proceedings of the London County Council in attempting to "beautify" Golder's Hill are criticised. "What is required is to leave the place more alone, and so to give nature a chance in it. Efforts to make things appear rustic almost invariably end by making them look artificial, and this is especially the case at Golder's Hill."

IN our notice of Sir C. Elliot's description of the nudibranchs of the Scottish Antarctic Expedition the number of species should have been given as six in place of two. Four of these species are new, two, as stated in the original notice, forming the types of as many new genera.

IN a brief note published in the *Atti dei Lincei* for June 3 Prof. Cuboni notifies the appearance in the island of Sardinia, in the district of Sassari, of a peculiar and little known disease of the olive. This disease, which is known in Italian as "Brusca," entirely despoils the plant of its leaves and fruit, and is associated with the fungus *Stictis Panizzei*. This fungus has an altogether remarkable history. It was first observed and studied by De Notaris near San Remo in 1842, and twenty years later it was found at Spezia. Between the years 1863 and 1899 no mention is to be found of its occurrence, but it suddenly reappeared in 1899 in the neighbourhood of Lecce, causing great damage to the olives of the district. The study of a fungus for which apparently very special conditions of growth are necessary seems likely to give results of particular interest in vegetable pathology.

IN the *Proceedings of the American Academy of Arts and Sciences* (vol. xl., No. 23) Mr. Gilbert N. Lewis makes a study of the auto-catalytic decomposition of silver oxide under the influence of heat. It is shown that the velocity of decomposition of the oxide at a constant temperature increases as the action proceeds, and, after passing through a maximum, falls gradually to zero. The phenomenon is due to the catalytic action of the metallic silver produced, the action proceeding very regularly according to an equation representing the simplest case of auto-catalysis. During the decomposition, definite temperatures between  $327^{\circ}\text{C.}$  and  $353^{\circ}\text{C.}$  were maintained by means of a thermostat containing a fused mixture of sodium and potassium nitrates. The purity and method of preparation of the silver oxide have a very great influence on the velocity of decomposition. The theory is advanced that the influence of the silver is directed in modifying the velocity of the reversible change  $\text{O}_2 \rightleftharpoons 2\text{O.}$

WE have received from the Medical Supply Association a pamphlet dealing with the Gaiffe auto-motor mercury-jet interrupter and its application in producing high-frequency currents. The interrupter is a simplified form of the mercury-jet turbine type, and is so arranged that the interrupter cuts off the current for both the motor and coil. The interrupter thus works automatically, and the use of an independent motor is dispensed with. The arrangement is simple, portable, and less expensive than any other form of turbine interrupter.

SOME singular results obtained during the investigation of the activity of radiotellurium (polonium) are recorded by Prof. B. Walter in a paper in the *Annalen der Physik* (vol. xvii. p. 367). It would appear that the  $\alpha$  rays of radiotellurium are capable of producing a species of fluorescence in the air through which they pass in such a manner that a radiation is set up having a pronounced photochemical action and similar properties to the ultra-violet portion of the spectrum lying between  $\lambda$  350 and  $\lambda$  290. The radiation is completely absorbed by aluminium foil 0.0091 mm. in thickness, but readily passes through a glass plate 0.15 mm. thick. In passing through a vacuum, however, the  $\alpha$  rays of radiotellurium do not give rise to a radiation, whilst in gases other than air or nitrogen the effect is only very slight. The new radiation seems, indeed, to be produced only by nitrogen, the effect with this gas being thirty to fifty times as great as with hydrogen or oxygen. This fact is of unusual significance as tending to throw light on some of the peculiar properties of the nitrogen atom.

THE part played by the copper salt in Deacon's process of preparing chlorine from hydrogen chloride is still uncertain, although many hypotheses have been put forward to explain it. That which has been most generally adopted assumes that cupric chloride is decomposed into cuprous chloride and chlorine, and that the cuprous chloride then undergoes re-conversion into the cupric salt under the influence of oxygen and hydrogen chloride, copper oxychloride being formed as an intermediate product. In an experimental investigation of the process published by M. G. Levi and V. Bettoni in the *Gazzetta* (vol. xxxv. p. 320) it is shown, however, that neither cuprous chloride nor the oxychloride can be used with a successful result in Deacon's process, and that the oxychloride is not convertible by hydrogen chloride into cupric chloride under the conditions in which chlorine is ordinarily formed. The hypothesis of an intermediate product is rejected and a purely catalytic action assumed, according to which the

velocity of the change  $2\text{HCl} + \frac{\text{O}_2}{2} = \text{H}_2\text{O} + \text{Cl}_2$  is greatly influenced by the presence of the copper salt. The catalyst is supposed to help the action by its tendency to combine with the water produced in the change.

AN interesting article by M. Albert de Romeu on the industry of the abrasive materials such as corundum, emery, and carborundum appears in the *Revue générale des Sciences* for June 15.

No. 6 of vol. ii. of *Le Radium* contains a useful article by M. G. H. Niewenglowski on the development of photographic plates which have been subjected to the action of radio-active substances.

UNDER the title "From the Borderland between Crystallography and Chemistry," an address delivered before the Science Club of the University of Wisconsin by Prof. Victor Goldschmidt, of Heidelberg, is printed in the *Bulletin of the university* (No. 108). Attention is directed to the interesting results that have been obtained by studying the etch-figures and dissolution bodies of crystals and their significance in forming a mechanical theory of dissolution.

THE sugar and cacao industries in the West Indies formed the principal subjects of discussion at the agricultural conference held in Trinidad in January; the proceedings in connection with these matters are reported in the first number of vol. vi. of the *West Indian Bulletin*. The condition of the sugar industry in Trinidad evoked considerable discussion, the subject at issue being the small amount of cane produced by the farmers per acre. Dr. F. Watts gave some account of the establishment of a well equipped central sugar factory in Antigua. The question of shade trees for cacao was debated, but evidence was not forthcoming to show why the shade that is considered necessary in Trinidad proves to be injurious in Grenada. Mr. L. Lewton-Brain and Mr. H. A. Ballou presented papers on the fungoid diseases and insect pests of sugar canes and cacao trees.

THE route, followed by Mr. B. Fedtschenko on his botanical journey through the Pamirs, as described in the *Bulletin du Jardin impérial botanique de St. Petersburg*, vol. v., lay along the river Pianj where it runs parallel and a little to the north of the boundaries of Kashmir and Chitral; thence proceeding north the explorer returned to Osch, in Turkestan. *Anaphalis seravschanica* and *Ferula gigantea* were the most remarkable plants obtained on these stages of the journey. A malformation of the flowers of *Tragopogon pratensis* showing pedicelled florets and phyllody of the calyx is described by Mr. Dmitriew.

MR. P. H. ROLFS presented the first results of his investigations into the diseases of citrus plants and fruits caused by the fungus *Colletotrichum gloeosporioides* in Bulletin No. 52 of the Bureau of Plant Industry, U.S.A. It is there shown that wither-tip, leaf-spot, anthracnose, and fruit canker are all due to the same fungus. Wither-tip and leaf-spot can be controlled by pruning followed by spraying with Bordeaux mixture, while spraying with ammoniacal solution of copper carbonate is efficacious against disease of the fruit. A later article in the *Florida Agriculturist* (March) deals with the appearance of these diseases on grape fruit.

THE Jamaica *Bulletin of Agriculture* (May) contains an article by Mr. Fawcett on Raiffeisen agricultural banks, prompted by conditions which suggest that such a system could be advantageously introduced into the island. The

hurricane in August, 1903, caused such widespread devastation that the Government of Jamaica deemed it advisable to make temporary loans, thus assuming liabilities which would have been unnecessary had a cooperative system of borrowing money been in existence. In the same volume diverse opinions are expressed on the question of rotation of crops in connection with cotton cultivation in Jamaica. Cotton every third or fifth year, with intermediate crops of cassava or yams, maize, and legumes, is suggested; these rotations preclude the possibility of securing a second crop of cotton.

AN instructive discussion of the law of biogenesis that "ontogeny repeats phylogeny" will be found in the paper forming Publication No. 30 of the Carnegie Institution of Washington, in which Mr. G. H. Shull bases his arguments upon a study of the leaf variation in *Stimacutaefolium*. In the seedlings the first leaf after the cotyledons is extremely variable, the second leaf is generally simpler, but subsequently a pinnate leaf is developed which passes into a much dissected type. Well marked but less regular variations occur at periods of rejuvenescence and on the inflorescence. Mr. Shull concludes that ontogenetic leaf-characters afford no satisfactory clue to phylogeny, but that differentiation is due to the changed structure of the protoplasm.

"PERCEPTION IN PLANTS" is the title of an article in *Naturwissenschaftliche Wochenschrift* (June), in which Prof. L. Kny discourses on *tropisms* and movements produced by other causes. Under heliotropism Prof. Kny mentions the views recently advanced by Haberlandt that the epidermal cells of a leaf are to be regarded as the perceptive region, and that their shape and contents enable them to act like a lens in collecting the rays of light. A photograph representing a surface view of the leaf of *Anthurium Maximiliani* tends to support this hypothesis, and also the observation that such a leaf, when submerged in water, fails to react.

WE have received from Messrs. Flatters and Garnett, Ltd., 48 Deansgate, Manchester, slides exhibiting the structure of the root in the male fern and onion. They are remarkably good, and slides such as these will be of value to collections used for teaching purposes. The preparation of the material has been carefully attended to, and the details of cell and nuclear division are well shown.

VOL. i. of the report of the Royal Commission on London Traffic (appointed in February, 1903, to inquire into and report upon the means of locomotion and transport in London) has just been issued. It will be followed by seven more volumes, dealing respectively with the following subjects:—vol. ii., minutes of evidence taken, with index and digest; vol. iii., appendices to the evidence taken, and index; vol. iv., appendices to the report and index; vol. v., maps and diagrams furnished to or prepared by the Royal Commission; vol. vi., maps and diagrams furnished to the Royal Commission; vol. vii., report of the advisory board of engineers, and index; vol. viii., appendix to same.

THE June issue of the *Bulletin de la Société d'Encouragement pour l'Industrie nationale* has been received. It contains a report, presented by M. A. Moreau on behalf of the Constructions and Fine Arts Committee, on "Ruberoid"; an account of a scheme for the extension of the international system to screws with a diameter of less than 6 mm.; and a paper by M. Maurice Alfassa on the organisation of labour in the United States. The economic notes, those on chemistry, and those on the mechanical sciences are as usual suggestive and interesting.

THE *National Geographic Magazine* for July contains many interesting communications, among which are an address delivered to the National Geographic Society by Prof. E. A. Grosvenor on the "Evolution of Russian Government," an article entitled "The Purple Veil," the "veil" being the product of the *Lophius piscatorius*, known popularly as the "goose-fish," the "all-mouth," and the "angler," and a short paper (superbly illustrated) on "The Victoria Falls." The National Geographic Society, of which the magazine is the organ, is now housed under a deed of trust in the Hubbard Memorial Hall at Washington, the building being "in trust for the sole use and benefit of the said National Geographic Society so long, and for and during such period of time, as said Society shall continue its corporate existence under its present charter, and shall continue to use and occupy the said land and premises and the improvements thereon for the objects and purposes set forth in its certificate of incorporation."

THE July number of the *Popular Science Monthly* contains an illustrated article on the University of Virginia, which, founded eighty years ago by Thomas Jefferson, has now as its first president Dr. E. A. Alderman. The illustrations contained in the paper show that the university possesses many buildings devoted to the teaching of science. Another article deals with Prof. C. A. Young, who, after more than fifty years' devotion to science, recently retired from the professorship of astronomy at Princeton University and the directorship of the Halstead Observatory.

IN view of the approaching meeting of the British Association in South Africa, a special number of *Knowledge and Illustrated Scientific News* has been issued. It contains portraits of the president and of the presidents of sections, a programme of the proceedings, with a route map, and many articles dealing with South Africa and likely, therefore, to be of interest to those taking part in the association's meeting.

MR. MURRAY announces "Noteworthy Families (Science)," by Mr. Francis Galton, F.R.S., and Mr. E. S. Galton. The work will form vol. i. of the publications of the Eugenics Record Office of the University of London. Another book to be brought out by Mr. Murray is "The Book of the Rothamsted Experiments," by Mr. A. D. Hall, the director of the Rothamsted Experiment Station.

MESSRS. JOHN WHELDON AND CO., of Great Queen Street, Lincoln's Inn Fields, have sent us part i. of their new botanical catalogue dealing with Cryptogamia, and containing some 700 titles of books and papers.

MESSRS. J. H. DALLMEYER, LTD., have just issued their new list of photographic lenses, cameras, telescopes, prismatic binoculars, &c.

A SECOND Italian edition of "Mattoni e Pietre di Sabbia e Calce," by M. E. Stöfler and Prof. M. Glasenapp, has been published by the firm of Ulrico Hoepli, of Milan. This edition is provided with eighty figures in the text and three folded plates at the end of the volume.

THE second edition of "The Central Alps of the Dauphiny," by W. A. B. Coolidge, H. Duhamel, and F. Perrin has just been issued by Mr. Fisher Unwin. The work, which is one of the "Conway and Coolidge's Climbers' Guides" series, has been revised and brought down to the end of 1904, and the arrangement of the sections has to some extent been altered.